

Disaster Situation Assessment, Bruce Baughman, Director, Operations Division,
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DISASTER SITUATION ASSESSMENT

by

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Abstract

This paper defines and discusses *disaster situation assessment*, and focuses on the means used by the U.S. Government to accomplish damage assessment in the field in a timely manner. Information from on-the-scene field assessment is critical to determining whether a Federal response will be required and, if so, accurately determining what will be required in the way of disaster assistance to affected citizens and the State and local governments who have primary responsibility for responding.

The paper, and the accompanying presentation, describes the U.S. system of Field Assessment Teams (FAsT) used for rapidly assessing disaster impacts, and provides an overview of the broader array of assessment tools used for disaster situation assessment. Early and critical response capabilities such as the Urban Search and Rescue System are also discussed in the context of Initial Response Resources that may be predeployed near an impact area to reduce response times for critical life-saving activities.

Finally, a background discussion of the *national disaster response system* in the United States provides the framework within which disaster situation assessment assets are developed, funded, and deployed.

I. Topic Description and Policy Issues

Disaster situation assessment is a critical response activity that seeks to gather information during the onset and impact phases of a developing emergency situation to determine if a Federal response will be required (to supplement State and local resources) and if so, to provide sufficient information to tailor the Federal response as accurately as possible to the needs of disaster victims and the State and local governments affected.

Situation assessment has several dimensions, each of which provide information that must be qualified by disaster managers with a knowledge of the limitations of the information provided. The FAsT is only one component of the overall situation assessment and information collection function, which includes predictive modeling, remote sensing, aerial reconnaissance, and ground assessment when possible. These activities may occur sequentially, may overlap, or occur simultaneously.

Situation Assessment Tools

Remote Sensing can provide digital and photographic products that must be interpreted to determine the situation on the ground before and after impact. The digital output from remote sensing assets (air breathing or satellite), when properly formatted, can be taken into a Geographic Information System (GIS) to plot areas affected and to provide other damage assessment information. Remote sensing coverage should begin before impact and continue through at least the first 48 hours after impact in order to be effective. To be effective in supporting a response, sensor platforms must be day/night all-weather and should include high definition daylight imagery, infrared and thermal imagery for night coverage, and radar (Moving Target Indicator and Synthetic Aperture Radar (MTI/SAR)) for seeing through clouds and weather. Sensors that cannot provide all-weather coverage often fail to provide information during the critical early hours after impact when information is most urgently needed.

A Geographic Information System can utilize existing data bases of demographic, economic, and political factors, and input from remote sensing assets designating areas affected, to first *estimate or predict* effects on population, number of homes and other facilities, and the infrastructure (roads, bridges, communications facilities, power distribution systems, water and sewage plants, government facilities, etc.) In slow onset disasters, a GIS system with appropriate data can provide initial estimates of expected damage to population, housing, and infrastructure even before impact. In sudden onset (without warning) situations a GIS can be used to make those same estimates within a few hours. Once hard information is available to confirm damage in the affected area, GIS estimates can be updated to provide a credible *assessment* of the situation in the affected area in map and tabular formats. GIS maps are particularly useful to disaster managers because they are easy to interpret and can be tailored to display information of specific interest to a disaster manager.

Ground Assessment Teams. "Hard information" must ultimately be gathered by personnel on the ground who can access the damaged area as soon as possible after impact, who know how to do rapid and accurate assessments of the damage to key facilities and infrastructure, and who have the means to record and communicate the information to response facilities and disaster managers that have the capability to dispatch resources. This paper, and the accompanying slide presentation, will describe the *field assessment capabilities* of the U.S. Federal Emergency Management Agency (FEMA), identify how those capabilities are being utilized, and suggest cooperative mechanisms for U.S./Japanese efforts to share information on situation assessment and to further improve disaster situation assessment in our respective countries.

Field Assessment

Component Relationships

FEMA has developed a program that provides for a rapid Federal field assessment capability. Immediately prior to or following a catastrophic disaster, a Field Assessment Team (FAsT) can be deployed to conduct a needs assessment that will permit the Federal Government to prioritize response activities and to allocate resources in anticipation of local and State government requests for Federal assistance. Performing the assessment within the first few hours after a major incident is critical to an effective Federal response to life-threatening situations and imminent hazards.

A FAsT will deploy *as a component of* the Advanced Element of the Emergency Response Team (ERT-A), supplementing the ERT-A's information gathering capabilities by arriving in the area of impact as soon after the onset of a disaster as possible. Therefore, the activation, deployment, mobilization, and demobilization of a FAsT will be coordinated with the ERT-A Team Leader.

In order to clarify the mission of the FAsT, it is necessary to distinguish its duties from those of a Preliminary Damage Assessment (PDA) Team. The FAsT mission is to "collect and provide information to determine requirements for critical resources needed to support emergency response activities." As a component of the ERT-A, the FAsT is responsible for assessing both the overall impact of a disaster event, and determining Federal *response* requirements. It is assumed that the impacts identified by the FAsT are those which will pose the greatest response challenge to the affected State government. Furthermore, the FAsT will most likely be deployed in "catastrophic" scenarios, where the magnitude of an event demonstrably indicates the need for Federal resources. In short, the FAsT is necessary to identify disaster-induced population needs that can only be addressed through Federal intervention and resource support.

On the other hand a Preliminary Damage Assessment is a mechanism used by FEMA to *collect information on a county by county basis to be used:*

- by the affected State(s) as a basis for the Governor's request for Federal Assistance;
- *by FEMA to document the recommendation made to the President in response to a Governor's request, and;*
- *as a management tool after a Presidential Disaster Declaration.*

In other words, a PDA is used to determine the amount of *recovery* assistance required by an affected State. Therefore, a PDA concentrates on such factors as: (1) the extent of assistance made available by voluntary relief organizations; (2) socioeconomic information, such as unemployment rate and the effect of the incident on employment, affected elderly population, ethnic and/or minority population, and the general income level of the affected population; (3) extent of flood, homeowners, and renters insurance coverage, and; (4) the identification of affected communities that are or are not participating in the National Flood Insurance Program

(NFIP). In the recent past, PDAs have primarily been used to determine eligibility for Public (infrastructure) Assistance under Public Law 93-288 (the Stafford Act).

Duties of the FAsT should not be confused or combined with the duties of a PDA Team. Each team performs specific, finite, functions that overlap only with respect to a transfer of information from the FAsT to PDA Teams after the FAsT mission is complete.

Field Assessment Teams

A FAsT is a pre-designated *team of technical experts* from Federal, State, and local emergency management agencies. A FAsT is alerted and deployed to a disaster to augment or supplement State and local assessment capabilities, normally based upon a request from the affected State for such assistance. All FAsT operations will be conducted as a closely coordinated joint Federal/State effort.

In certain cases, a FAsT may be ordered by FEMA and deployed prior to a disaster to a forward location in anticipation of a possible State request for assessment assistance. Such a deployment would precede a large-scale or catastrophic incident such as a hurricane. In consideration of a worst-case scenario that would require the pre-deployment of multiple FAsT teams, the forward location would normally be established at a Federal facility geographically close to the presumed affected area. For unpredicted disasters, teams may deploy closer to the actual area of impact.

If not deployed prior to a disaster, the FAsT will be activated as soon after a catastrophe or large-scale event as possible, and will be prepared to deploy within six (6) hours of activation and will arrive onscene within 12 hours.

A FAsT is designed to be self-sufficient for the first seventy-two (72) hours of an operation. This is accomplished by utilizing pre-packaged support kits, which include a personal kit, a field-issued individual kit, a team life support kit (including food, water, and shelter), and a communications support kit.

Urban Search and Rescue

While FAsT teams can move through an impacted area and make rapid assessments of the type of damage to facilities, and a GIS can estimate the number of people and homes located in an impact area, they cannot determine how many people may be trapped and alive in collapsed structures following a catastrophic earthquake. Only an Urban Search and Rescue (US&R) Team can ultimately enter those structures, and using the latest remote video and listening devices, determine how many victims remain alive in trapped structures and require rescue. For this reason, it is important to predeploy or give very high priority to initially deploying US&R teams to the impacted area as soon as possible. While not normally considered a part of traditional situation assessment, the US&R capability is an important component of situation assessment following a catastrophic earthquake.

Responsibilities

State and local government authorities are responsible for first response actions and for initial situation assessment. However, the FAsT may be deployed to assist States when coordinated Federal assistance is necessary, due to an exhaustion of State resources and capabilities. The FAsT will be staffed by pre-selected interagency personnel.

State Responsibilities. The affected State has the responsibility to initially request a FAsT through the affected FEMA Regional Office. When requesting a FAsT, the State will also provide initial information for FEMA to determine the FAsT deployment destination and requirements. Deployment of the FAsT will occur simultaneously with the activation and deployment of the ERT-A. The State is also responsible for designating a qualified individual to fill the Emergency Management Agency (EMA) Representative position on the FAsT.

FEMA Regional Office Responsibilities. FEMA Regional offices have the responsibility for managing and coordinating the Federal response as determined by FAsT assessment data collected during assessment operations. In addition, FEMA Regional offices have the responsibility to assist FEMA Headquarters in rostering and training personnel who comprise the FAsT.

FEMA Headquarters Responsibilities. FEMA Headquarters has responsibility for maintaining current FAsT rosters and providing required training and certification of FAsT personnel. Headquarters is also responsible for developing initial information requirements needed from State and local assessment efforts and for deploying Mobile Emergency Response Support (MERS) units used to provide communications and logistical support to the FAsT. Publications and maintenance of documents relating to FAsT operations are also responsibilities of Headquarters.

II. Background

The national disaster response framework encompasses all of the efforts undertaken either systematically, in confederation, or independently by local and State governments, voluntary and civic organizations, private industry, and the Federal government to respond to the needs of victims of incidents, emergencies, or disasters. Within this national framework the Federal government serves as a component, contributing its capabilities and resources in two principal ways: to augment State, local, and private efforts when the magnitude or breadth of damage exceeds their capabilities to respond; and, to take the lead in responding to emergencies for which the Federal government has primary responsibility, such as terrorism events or immigration emergencies.

Within the national disaster response framework, the Federal component is organized into a Federal disaster response system. The capabilities and resources which make up the Federal disaster response system include a combination of Presidential leadership; Congressionally

established assistance programs and funds; department and agency policy development and planning; operational development and employment of groups and teams of personnel at the Federal Headquarters and Federal regional levels; deployment of specialized equipment; and use of permanent and temporary operating facilities.

The authoritative basis that underlies this Federal disaster response system includes a number of key pieces of legislation, Executive Orders, and interagency plans. For most types of emergency or disaster events which would require Federal involvement, the key piece of legislation is the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288, as amended). The Stafford Act, enacted in 1988, provides the legislative basis for the Federal government to respond to emergencies and disasters in support of affected local and State governments.

Congress annually appropriates funds to the President's Disaster Relief Fund, which is used to provide supplementary federal assistance to individuals, businesses, and public entities affected by emergencies or major disasters. The Disaster Relief Fund is used by the Federal Emergency Management Agency (FEMA) to fund its response activities, as well as to provide reimbursement to other Federal departments and agencies for missions assigned by FEMA during emergency operations. Congress periodically provides supplemental appropriations to the Disaster Relief Fund to ensure adequate financial reserves for Federal response operations.

In addition to the Stafford Act, other key Federal legislation provides guidance relevant to specialized types of emergencies or incidents, such as oil spills, hazardous materials incidents, immigration emergencies, or terrorism events. Certain Executive Orders issued by the President provide guidance to Federal departments and agencies concerning how the Executive Branch will coordinate its response to emergencies and disasters and its support to States. These relevant laws and Executive Orders are discussed in greater detail in the Federal Response Plan. Finally, the Code of Federal Regulations (CFR) provides additional guidance concerning the roles and responsibilities exercised by Executive Branch departments and agencies in emergency management, disaster response, and relevant programs.

Using these laws, Executive Orders, and Federal regulations as an authoritative basis for action, Federal departments and agencies further refine their emergency management roles through policy development and planning. For most types of emergencies and disasters, the basic forum for policy coordination and interagency planning is the Federal Response Plan, or FRP. The FRP addresses the basic relationships and structures by which the Federal government mobilizes its resources and conducts activities to augment State and local response efforts. It outlines the planning assumptions, policies, concept of operations, organizational structures, and Federal responsibilities for providing assistance. The FRP, adopted by 29 Federal Departments and agencies and the American Red Cross, encompasses the full spectrum of natural and technological emergencies and disasters, and defines linkages to other Federal interagency plans.

The FRP uses a functional approach to managing the provision of Federal goods and services, grouping the types of Federal assistance which a State is most likely to need under 12 Emergency Support Functions (ESFs). Each ESF is headed by a primary agency, designated on the basis of

its resources and capabilities in that functional area. Other agencies are designated as support agencies for one or more ESFs, based on their resources and ability to provide support in specific functional areas. The 12 ESFs and their primary agencies are as follows:

- ESF 1 Transportation (Department of Transportation)
- ESF 2 Communications (Office of Science and Technology Policy)
- ESF 3 Public Works and Engineering (Department of Defense/U.S. Army Corps of Engineers)
- ESF 4 Firefighting (Department of Agriculture/U.S. Forest Service)
- ESF 5 Information and Planning (FEMA)
- ESF 6 Mass Care (American Red Cross)
- ESF 7 Resource Support (General Services Administration)
- ESF 8 Health & Human Services (Dept of Health & Human Services/ U.S. Public Health Service)
- ESF 9 Urban Search and Rescue (FEMA)
- ESF 10 Hazardous Materials (Environmental Protection Agency)
- ESF 11 Food (Department of Agriculture/Food and Consumer Service)
- ESF 12 Energy (Department of Energy)

The basic concept of ESFs carries over from the FRP to a series of Regional Response Plans, which are interagency plans governing the response of Federal regional assets to an emergency or major disaster in their region. The ESF concept also is reflected in the emergency operations plans and teams employed by many States. Thus the concept of organizing response operations by similar operational functions or ESFs is a common element to many of the State, Federal regional, and Federal national components in the national disaster response framework.

Operations conducted by structures of the Federal disaster response system may begin well in advance of a disaster or emergency occurrence, as various elements of the system monitor situations to identify potential or emerging emergency or disaster incidents, and take actions to move their resources to a higher state of readiness. Depending on the type of incident and the anticipated magnitude of the damage, the Federal disaster response system may activate and employ one, several, or all of its components. For example, the type and extent of damage encountered in the aftermath of a minor flood would require activation of different Federal response components than after a massive earthquake. These components may be activated under the FRP for incidents which may result in a Presidential Declaration of emergency or major disaster, or under another Federal operations plan appropriate to certain specialized types of incidents, such oil spills, radiological events, immigration emergencies, or acts of terrorism. Consequently, plans for establishing, maintaining, and implementing this system must assure maximum flexibility.

Developing and maintaining the readiness of the Federal disaster response system requires extensive planning, coordination, resource investment, training, and exercising by FEMA and other Federal departments and agencies that may have a primary or support role in responding to emergencies or disasters. Maintenance of the system also requires the regular review, testing, and modification of plans and procedures in order to ensure a continuing state of preparedness.

III. Proposal

The U.S./Japan partnership for disaster mitigation provides a splendid framework to pursue research in areas that hold the promise of significant improvement of our individual and joint capabilities in performing disaster situation assessment. This is critical to improving our capabilities for disaster response because it is damage assessment that guides the timing, size, and scope of governments' response to catastrophic disasters. And speed of response, or timing, holds the potential for saving a significant number of lives that would otherwise be lost. Urban Search and Rescue doctrine suggests that the first 12-24 hours is when the majority of lives can be saved, if that is possible. After 24 hours the probability of survival declines rapidly for trapped or injured survivors.

It is a given that a speedy response is difficult for governments where myriad response elements must be coordinated, and decision-making is shared among different levels of government and within the Federal structure. However, response times are reduced in direct proportion to how well planning and preparations are made, and the decision process automated. Predeployment of resources is essential if response times are to be reduced so as to maximize the saving of lives. Mechanisms must be in place to cover predeployment costs so that funding issues do not delay decisions and actions.

Thus, it is proposed that within the U.S./Japanese partnership, and using the mechanisms described below, that we pursue and coordinate the following research and development objectives to develop, improve, and apply needed technologies to enhance our mutual capabilities for disaster situation assessment and to make these technologies available at reasonable cost to users.

- Exchange information on current technologies and their application to disaster situation assessment to improve current practices.
- Develop and share criteria for effective disaster situation assessment and response.
- Share planning and implementation documentation to ensure that effective organizational practices are widely available.
- Establish communication channels for exchanging information freely on new innovations that work and those that are found to be ineffective.
- Exchange information on GIS products and methods that prove effective in practice, and share information on GIS software and its use.

There may be other activities that can be of mutual benefit to improve disaster situation assessment which will be identified in the course of time. Such activities can be explored for the mutual benefit of both nations towards the end of improving our capabilities for disaster response and recovery.

IV. Cooperative Mechanisms

The U.S./Japan Common Agenda (UJCA) provides the broad framework for cooperative efforts for improving disaster response and recovery processes in both countries, particularly in defining and establishing broader mechanisms for sharing information on management, planning, documentation, and for organizing and coping with the political and legal environment for disaster response activities.

In addition, the Japan/U.S. Science and Technology Agreement (JUST) can serve as the mechanism for conducting the joint research and development of technical means for improving disaster situation assessment through scientific, technical, and professional organizations and through supporting universities and industry.

The improvement of disaster situation assessment, and the broader response and recovery processes, require a unique sharing of data and other information between all levels of government, and among entities within each level. Progress in technology, and application of the technology, requires close collaboration between governments which use the technology and universities and private industry which must develop the technology. It is a complex web of interrelationships which, by its very nature, requires that we reach outside of our organizations to seek advice, guidance, and assistance from others as we engage in preparing our national means to support disaster response effectively.

V. Related Issues

The technology used for responding to catastrophic earthquakes is essentially the same technology for responding to other disasters, with minor differences. Research on improving situation assessment, and other response and recovery capabilities in earthquakes has direct application to hurricanes, floods, and most other disasters. Communications requirements: food, water, sanitation, medical, and other emergency human needs; rebuilding of the governmental infrastructure; the need for restoring water, sewage, telephone, power, and transportation systems are common to all disasters.

For governments, the two most difficult factors in managing a disaster response is to achieve a rapid response that can most directly effect the saving of lives and minimize suffering, and tailor the response so that it matches the needs of victims and affected governments as accurately as possible. Our advance planning, preparation, and coordination are mostly directed at achieving this timely response that closely matches the needs of the affected citizens and the State and local governments we seek to help.

Finally, in a catastrophic earthquake, situation assessment by remote sensing and FAsT teams onscene cannot determine how many people are trapped in collapsed buildings and other structures. Urban Search and Rescue Teams must be deployed onscene to search each collapsed structure. To be effective, they must use the latest technology to stabilize the damaged structures, locate the trapped and injured who are still alive, and proceed with extraction of

trapped victims. The US&R activity is absolutely time critical and must be carried out almost simultaneously with FAsT and other immediate post impact actions to be effective in saving lives. Improving the technology available to US&R teams to accomplish these very dangerous and time critical tasks must receive high priority when establishing research and development objectives.

VI. Key References

1. *The Federal Disaster Response System (Draft)*, Operations System Description Overview, Federal Emergency Management Agency, Response and Recovery Directorate, Operations Division (RR-OP), March, 1966.
2. *The Federal Response Plan*, (for Public Law 93-288, as amended), as updated and modified based on interagency negotiations, Federal Emergency Management Agency, April 1992 to present.
3. *Field Assessment Team Operations Manual (FAsT)*, Federal Emergency Management Agency, RR-OP, April 1995.
4. Technology Applications by the Federal Emergency Management Agency in Response, Recovery, and Mitigation Operations Following Natural Disasters, a paper prepared for the 27th Joint Meeting of the U.S./Japanese Panel on Wind and Seismic Effects, Federal Emergency Management Agency, RR-OP, May 16-27, 1995.
5. *Guide for Emergency Operations Managers*, Response and Recovery Mobile Operations Capability, Federal Emergency Management Agency, undated (circa January 1996).
6. *Remote Sensing and Reconnaissance Support* - a Component of the Federal Response Plan, Operational System Description and Standard Operating Procedure. Federal Emergency Management Agency, Office of Security, undated (circa November, 1995).
7. *A Guide to Federal Aid in Disasters*, FEMA-262, Federal Emergency Management Agency, April 1995.
8. *A Citizens Guide to Disaster Assistance*, IS-7, Federal Emergency Management Agency, December 1994.

DISASTER SITUATION ASSESSMENT

First Earthquake Policy Symposium
September 16-18, 1996



Federal Emergency Management Agency

Disaster Situation Assessment Components



- Remote Sensing and Reconnaissance Support
- Automation Support
- Ground Assessment Teams
- Information & Planning (ESF-5) Function

Remote Sensing and Reconnaissance Support



■ Remote Sensing (Air Breathing & Satellite)

- ❖ Photography (of limited use)
- ❖ Digitized Imagery (most useful--> GIS)
- ❖ Infrared and Thermal Imagery (night coverage)
- ❖ Radar (high definition for all weather)

■ Reconnaissance Support

- ❖ Civil Air Patrol
- ❖ State and Regional Disaster Airlift (SARDA) Plans

Automation Support



■ Modeling available for v Hurricanes

- ❖ Earthquakes
- ❖ Floods

■ Geographic Information System (GIS)

- ❖ Digitized inputs from Remote Sensing assets
- ❖ Damage Estimation from existing national data
- ❖ Damage Assessment from ground truth reported by Ground Assessment Teams



Ground Assessment Teams

- Emergency Response Team - Advanced (ERT-A)
- Field Assessment Team (FAsT)
- Urban Search & Rescue (US&R) Teams
- Preliminary Damage Assessment (PDA)



Emergency Response Team - Advanced (ERT-A)

- 1 - 3 persons, sometimes more
- At least one person deployed to State EOC
- Others identify candidate sites for...
 - ❖ Mobilization Center
 - ❖ Disaster Field Office
 - ❖ MERS Assembly Area for advance mobile equipment
 - ❖ Other critical facilities (communications, billeting, etc. for advance team elements such as FAsT)

Field Assessment Team (FAsT) MISSION



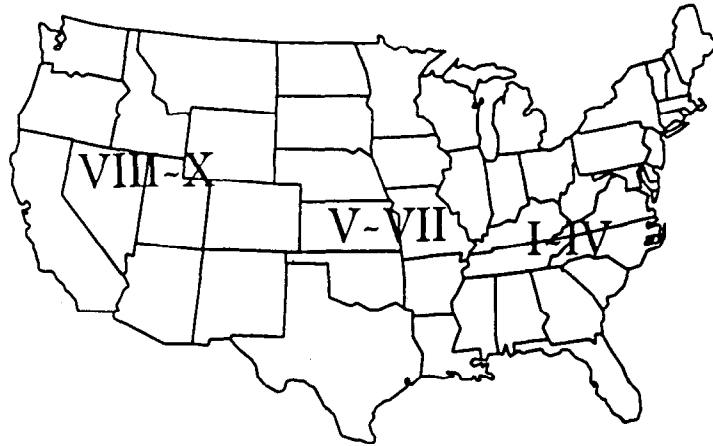
- Collect and provide information as rapidly as circumstances allow to...
 - v provide ground assessment to emergency managers who must decide if a Federal response is required
 - ❖ provide information to assist managers in determining the size and scope of the Federal response
 - ❖ determine requirement for critical resources

Field Assessment Team (FAsT) Concept of Operations

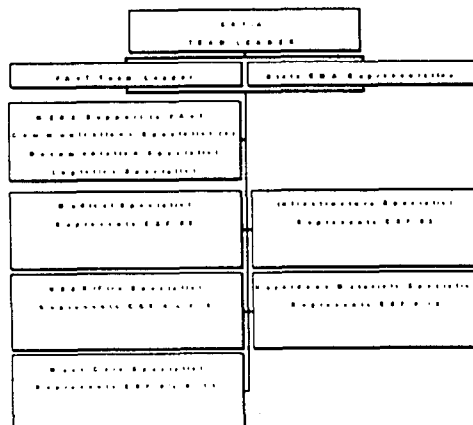


- Deploy within 6 hours of activation
- Arrive on-scene within 12 hours
- Small, self-sufficient teams (13 members)
- Complete mission within 24-72 hours
- Standard interagency team organization, equipment, and procedures
- Team a component of ERT-A

FASt GEOGRAPHIC REPRESENTATION



FASt ORGANIZATION



FAsT OPERATIONS



■ FAsT Team Leader

- ❖ FEMA Regional personnel (2 per Region)
- ❖ Supervises field assessment process
- ❖ Coordinates assessment with designated State representative

■ State EMA Representative

- ❖ Co-manager of FAsT
- ❖ Provides liaison between the affected State and FAsT during field assessment process
- ❖ Identifies impact areas and hazards for FAsT
- ❖ Assists Team Leader in developing and implementing field assessment

MERS Support to FAsT Operations



■ Maintain Life-Support Kit

- ❖ Purchase, maintain support equipment
- ❖ Prepare 72-hour life-support kit on FAsT activation including food, water, shelter

■ Maintain Communications Support Kit

- ❖ Very high frequency (VHF) and high frequency (HF) radios
- ❖ Computer interface for radios
- ❖ Laptop computers
- ❖ Hand-held VHF radios

■ Provide FAsT Transport Vehicles

FAST OPERATIONS

Key Technical Staff



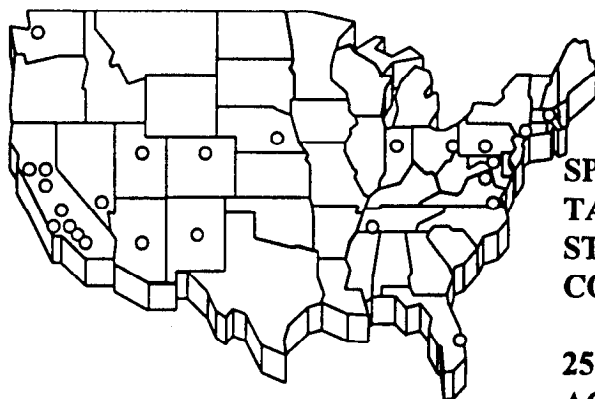
- Medical Specialist (ESF 8)
- US&R/Fire Specialist (ESF 4, 9)
- Mass Care Specialist (ESF 6, 11)
- Infrastructure Specialist (ESF 3)
- Hazardous Materials Specialist (ESF 10)

FAST vs PDA



- Field Assessment Team (FAST)
 - ❖ Conduct immediate needs assessment
 - ❖ Determine Federal response requirements Mission duration: 24-72 hours
 - ❖ 13-person team of technical specialists
- Preliminary Damage Assessment (PDA)
 - ❖ Definitively determine impact and magnitude
 - ❖ Use findings to calculate fiscal assistance required
 - ❖ Mission duration: Ongoing; as requested by affected State, beginning within a few days or later
 - ❖ 1 - 2 people per county to do detailed survey

URBAN SEARCH & RESCUE



**SPECIALIZED
TASK FORCES FOR
STRUCTURAL
COLLAPSE RESCUE**

**25 TASK FORCES
ACROSS U.S. ARE
LOCALLY
CO-SPONSORED**

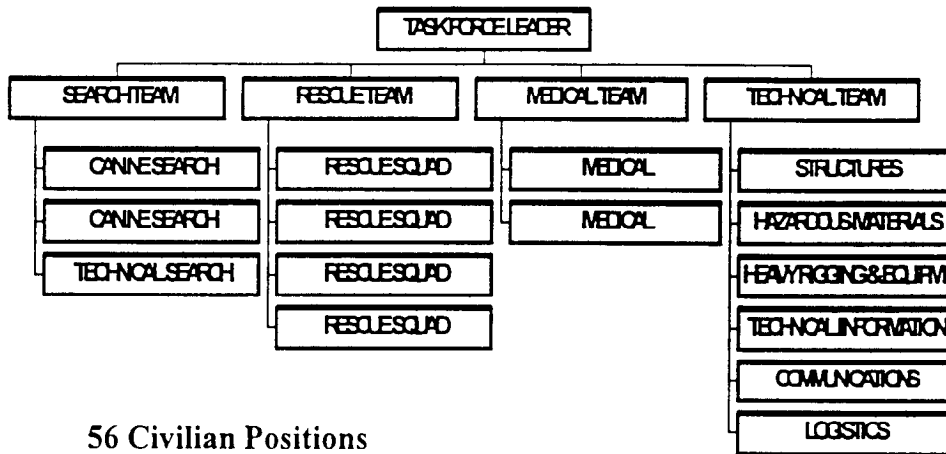
US&R

US&R TASK FORCE OPERATIONAL GUIDELINES

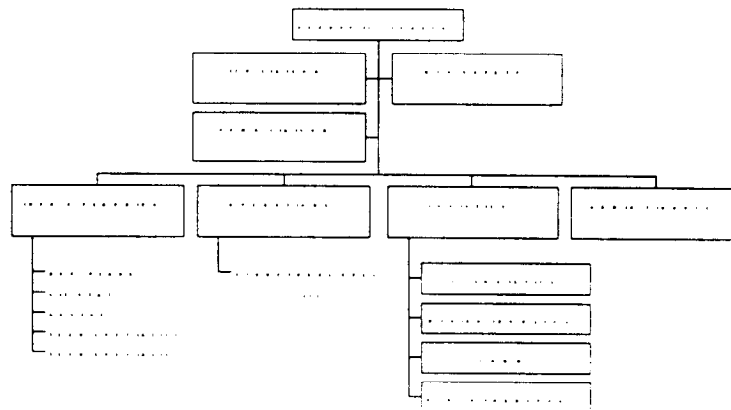


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- 24-HOUR, TWO 12-HOUR SHIFT OPERATION
 - SELF-CONTAINED FOR 72 HOURS
 - RESUPPLY AFTER 72 HOURS
 - REPORTS TO POINT OF DEPARTURE WITHIN
6 HOURS OF ACTIVATION
 - MULTI-FACETED/CROSS-TRAINED PERSONNEL
 - STANDARD EQUIPMENT & TRAINING
 - USES *INCIDENT COMMAND SYSTEM*

URBAN SEARCH & RESCUE TASK FORCE



FEMA US&R INCIDENT SUPPORT TEAM

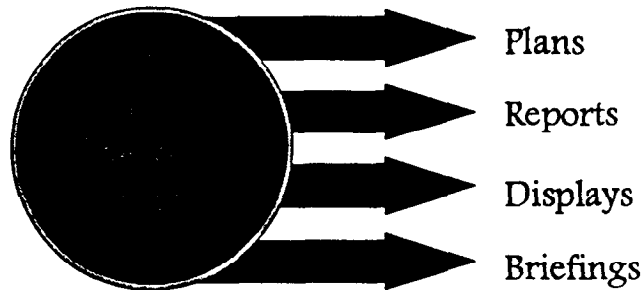


INFORMATION AND PLANNING MISSION

(Emergency Support Function #5)



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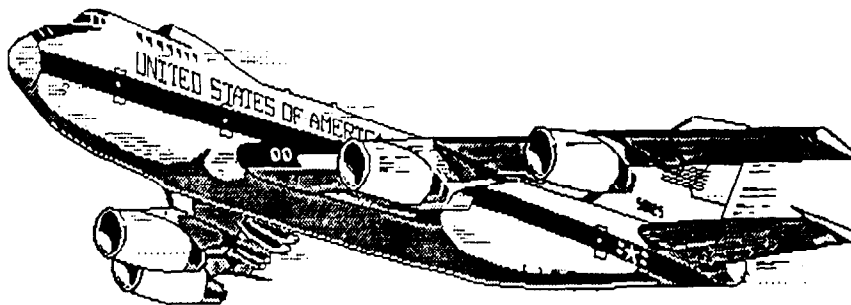
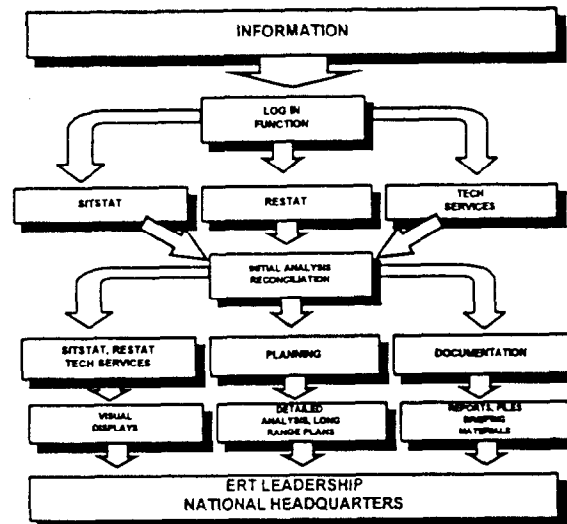
INFORMATION TRANSFER

between FEMA teams and facilities



- Complete ADP (computer) support in operating facilities and in the field
- MERS Mobile Communications in field
 - v HF Radio, UHF, VHF, Satellite links
 - ❖ Line of Sight (LOS) to long distance lines
 - ❖ Cellular and INMARSAT Satellite
 - ❖ Landline via laptop modem and FAX
- FEMA LAN/WAN within 4-5 days in DFOs
- High-speed database management system

INFORMATION FLOW



EMERGENCY RESPONSE TEAM DEPLOYMENT
aboard the
NATIONAL AIRBORNE OPERATIONS CENTER